Statement by Vernon J. Ehlers
on the Introduction of the Aquatic Invasive Species Research Act
March 5, 2003

Mr. Speaker, I am pleased to introduce today a bill that is a critical component in our efforts to combat aquatic invasive species – the Aquatic Invasive Species Research Act. This legislation creates a comprehensive research program that supports federal, state and local efforts to prevent invasive species from ever entering our waterways, as well as detection, control and eradication efforts once they are here. It complements a bill introduced today by Mr. Gilchrest in the House and Mr. Levin in the other body to reauthorize the National Invasive Species Act. This legislation is a critical component in our battle against these harmful and extremely damaging pests.

In undertaking this effort, I have found that many people wonder – "What is an invasive species? Why it is so crucial to keep them out of United States?" It is important that we understand these questions so that we can appreciate the scope of the threat that invasive species pose to our economy and environment.

The introduction of non-native species is not new to the United States. People have brought non-native plants and animals into the United States, both intentionally and unintentionally, for a variety of reasons, since the New World was discovered. Some examples include the introduction of nutria (which is a rodent similar to a muskrat) by trappers to bolster the domestic fur industry, and the introduction of the purple loosestrife plant to add rich color to gardens. Both nutria and purple loosestrife are now serious threats to wetlands. Non-native species may also be introduced unintentionally, such as through species hitching rides in ships, crates, planes, or soil coming into the United States. For example, zebra mussels, first discovered in Lake St. Clair near Detroit in the late 1980s, came into the Great Lakes through ballast water from ships.

Not all species brought into the country are harmful to local economies, people and/or the environment. In fact, most non-native species do not survive because the environment does not meet their biological needs. In many cases, however, the new species will find favorable conditions (such as a lack of natural enemies or an environment that fosters propagation) that allow it to survive and thrive in a new ecosystem.

Only a small fraction of these non-native species become an "invasive species" – defined as a species that is both non-native to the ecosystem and whose introduction causes or may cause economic or environmental harm or harm to human health. However, this small fraction can cause enormous damage, both to our economy and our environment.

Estimating the total economic impact of invasive species is extremely difficult. No single organization accumulates such statistics comprehensively. However, researchers at Cornell University estimate that invasive species cost Americans $137 billion annually. This includes the cost of control, damage to property values, health costs and other factors. Just one species can cost government and private citizens billions of dollars. For example, zebra mussels have cost the various entities in the Great Lakes basin an estimated $3 billion during the past 10 years for cleaning water intake pipes, purchasing filtration equipment, etc.

Beyond economic impacts, invasive species cause ecological costs that are even more difficult to quantify. For example, sea lamprey control measures in the Great Lakes cost approximately $10 million to $15 million annually. However, we do not have a good measure of the cost of lost fisheries due to this invader, which was first discovered in the Great Lakes in the early 1900s. In fact, invasive species now are second only to habitat loss as threats to endangered species. Quantifying the loss due to extinction caused by these invasive species is nearly impossible.

Given the enormous economic and environmental impacts these invaders cause, two clear goals emerge: First, we need to focus more resources and energy into dealing with this problem at all levels of government; second, our best strategy for dealing with invasive

species is to focus these resources to prevent them from ever entering the United States. Spending millions of dollars to prevent species introductions will save billions of dollars in control, eradication and restoration efforts once the species become established. In fact, one theme is central to both Mr. Gilchrest's bill and this legislation. It is an old adage, but one worth following – "An ounce of prevention is worth a pound of cure."

To successfully carry out this strategy, we need careful, concerted management of this problem underpinned by research at every step. For example, we know that we must do more to regulate the pathways by which these invaders enter the United States (ships, aquaculture, etc.), which is an important component of Mr. Gilchrest's legislation. However, research must inform us as to which of these pathways pose the greatest threat and which techniques used to manage each pathway are effective. This legislation would help develop this understanding through the ecological and pathway surveys conducted under this bill. In fact, research underlies every management decision aimed at detecting, preventing, controlling and eradicating invasive species; educating citizens and stakeholders; and ensuring that resources are optimally deployed to increase the effectiveness of government programs. These items are also reflected in the legislation, which I will now describe in more detail.

The bill is divided into six main parts. The first three parts outline an ecological and pathway research program, combining surveys and experimentation, to be established by the National Oceanic and Atmospheric Administration, the Smithsonian Environmental Research Center and the United States Geological Survey. This program is focused on understanding what invasive species are present in our waterways, which pathways they use to enter our waterways, how they establish themselves once they are here and whether or not invasions are getting better or worse based on decisions to regulate pathways. In carrying out this program, the three principal agencies I mentioned previously will develop standardized protocols for carry out the ecological and pathway surveys that are called for under the legislation. In addition, they will coordinate their efforts to establish long-term surveys sites so we have strong baseline information. This program also includes an important grant program so that academic researchers and state

agencies can carry out the surveys at diverse sites distributed geographically around the country. This will give federal, state and local managers a more holistic view of the rates and patterns of invasions of aquatic invasive species into the United States. Lastly, the principal agencies will coordinate their efforts and pull all of this information together and analyze it to help determine whether or not decisions to manage these pathways are effective. This will inform policymakers as to which pathways pose the greatest threat and whether or not they need to change the way these pathways are managed.

The fourth part of the bill contains several programs to develop, demonstrate and verify technologies to prevent, control and eradicate invasive species. The first component is an Environmental Protection Agency grant program focused on developing, demonstrating and verifying environmentally sound technologies to control and eradicate aquatic invasive species. This research program will give federal, state and local managers more tools combat invasive species that are also environmentally sound. The second component is a program to develop dispersal barriers – administered by the Army Corps of Engineers – which have been a critical issue in the Chicago Sanitary Canal where Great Lakes managers have been desperately trying to keep the Asian Carp from entering Lake Michigan from the Mississippi River system. The third component is expansion both in terms of scope and funding of a National Oceanic and Atmospheric Administration and Fish and Wildlife Service program geared toward demonstrating technologies that prevent invasive species from being introduced by ships. This is the federal government's only program that is focused solely on helping develop viable technologies to treat ballast water. It has been woefully underfunded in the past and deserves more attention.

The fifth part of the bill focuses on setting up research to directly support the Coast Guard's efforts to set standards for the treatment of ships with respect to preventing them from introducing invasive species. Ships are a major pathway by which invasive species are unintentionally introduced; the ballast water discharged by ships is of particular concern. One of the key issues that has hampered efforts to deal with the threats that ships pose is the lack of standards for how ballast water must be treated when it is

discharged. The Coast Guard has had a very difficult time developing these standards since the underlying law that support their efforts (the National Invasive Species Act) did not contain a research component to support their work. This legislation provides that missing piece.

Finally, the sixth and final part supports our ability to identify invaders once they arrive. Over the past couple of decades, the number of scientists working in systematics and taxonomy, expertise that is fundamental to identifying species, has decreased steadily. In order to address this problem, the legislation sets up a National Science Foundation program to give grants for academic research in systematics and taxonomy with the goal of maintaining U.S. expertise in these disciplines.

Taken together, both my legislation and Mr. Gilchrest's represent an important step forward in our efforts to prevent invasive species from ever crossing our borders and combat them once they are arrive. New invaders are arriving in the United States each day, bringing with them even more burden on taxpayers and the environment. We simply cannot afford to wait any longer to deal with this problem, and so I urge all of my colleagues to support this legislation.